

Claims

1 1. Safety apparatus to be added to a winged intravenous infusion
2 assembly, said infusion assembly having a needle attached to one end of
3 a body and a hub at the other end of said body, a pair of wings extending
4 from said body between said one and other ends, said apparatus
5 comprising:

6 a base adapted to be matingly fitted onto said body, said base
7 having at least one pair of arms that firmly embraces a portion of said body
8 or said hub when said base is fitted to said body; and

9 a housing hingedly attached to said base, said housing being
10 pivotable to a position in substantial alignment along the longitudinal axis
11 of said base for enveloping said needle.

1 2. Safety apparatus of claim 1, further comprising:

2 locking means integral to said housing for fixedly retaining said
3 needle relative to said housing once said housing is pivoted substantially
4 to said alignment position.

1 3. Safety apparatus of claim 2, wherein said locking means comprises
2 a hook that snaps over and retains said needle within said housing when
3 said housing is pivoted substantially to said alignment position.

1 4. Safety apparatus of claim 2, wherein said locking means comprises
2 at least one pair of fingers coacting to prevent said needle from being
3 removed from said housing once said housing envelops said needle.

1 5. Safety apparatus of claim 1, wherein said base includes at least one
2 locking means and said housing includes at least an other locking means;
3 and

4 wherein said one and other locking means coact with each other for
5 fixedly retaining said housing relative to said base when said needle is
6 enveloped by said housing.

1 6. Safety apparatus of claim 1, wherein said base includes a pair of
2 first locking means and said housing includes a corresponding pair of
3 second locking means, said first and second pairs of locking means
4 cooperating to maintain said housing relative to said base when said
5 housing is pivoted to said alignment position.

1 7. Safety apparatus of claim 1, wherein said base is configured to have
2 an interior circumference surface that comes into intimate contact with a
3 substantial portion of the outer circumference surface of said body of said
4 infusion assembly when said base is fitted onto said body..

1 8. Safety apparatus of claim 7, wherein said interior circumference
2 surface of said base is coated with an adhesive means for bonding said
3 base to said body of said infusion assembly once said base is matingly
4 fitted to said body.

1 9. Safety apparatus of claim 1, wherein said base comprises two pairs
2 of arms, one of said pairs of arms embracing said hub of said body while

3 the other of said pairs of arms embracing the portion of said body
4 separating said wings from said needle.

1 10. Safety apparatus of claim 1, wherein said base comprises a tubular
2 portion that slidably inserts over an end portion of said body separating
3 said wings from said needle to thereby matingly fit said base to said body.

1 11. Safety apparatus of claim 10, wherein said base comprises a pair of
2 arms extending from the end of said base remote from said tubular portion,
3 said pair of arms snappingly fitted over said hub to securely embrace said
4 hub after said tubular portion is fully mated to said end portion of said body
5 of said infusion assembly.

1 12. Safety apparatus of claim 1, wherein said housing comprises a
2 groove extending substantially along the length of said housing, said
3 groove being dimensioned to have a cross section that is slightly smaller
4 than the cross section of said needle so that when said housing is pivoted
5 to said alignment position, said needle is pressed into said groove and is
6 fittingly enveloped thereby.

1 13. A method of preventing a contaminated needle of a winged
2 intravenous infusion assembly from being exposed to the environment,
3 said infusion assembly having a body from which said needle extends, a
4 pair of wings extending from said body perpendicularly to said needle, said
5 method comprising the steps of:

6 mating a safety device to said body of said assembly, said safety
7 device including a base having at least one pair of arms that firmly
8 embraces a portion of said body, said safety device further having a
9 housing hingedly extending from said base; and
10 pivoting said housing to a position in substantial alignment along the
11 longitudinal axis of said base to envelop said needle.

1 14. Method of claim 13, further comprising the step of:
2 providing locking means integral to said housing for fixedly retaining
3 said needle relative to said housing once said housing is pivoted
4 substantially to said alignment position.

1 15. Method of claim 14, wherein said locking means comprises a hook
2 that retains said needle within said housing when said housing is pivoted
3 substantially to said alignment position.

1 16. Method of claim 14, wherein said locking means comprises at least
2 one pair of fingers coacting to prevent said needle from being removed
3 from said housing once said housing is pivoted to envelop said needle.

1 17. Method of claim 13, further comprising the step of:
2 forming a groove substantially along the length of said housing, said
3 groove being dimensioned to have a cross section slightly smaller than the
4 cross section of said needle so that when said housing is pivoted to said
5 alignment position, said needle is pressed into said groove and is fittingly
6 enveloped thereby.

1 18. Method of claim 13, further comprising the step of:
2 providing at least one locking means at said base and at least an
3 other locking means at said housing;
4 wherein said one and other locking means coact with each other for
5 fixedly retaining said housing relative to said base when said housing is
6 pivoted to envelop said needle.

1 19. Method of claim 13, further comprising the step of:
2 providing a pair of first locking means at said base and a
3 corresponding pair of second locking means at said housing, said first and
4 second pairs of locking means cooperating to maintain said housing
5 relative to said base when said housing is pivoted to envelop said needle.

1 20. Method of claim 13, further comprising the step of:
2 configuring said base to have an interior circumference surface that
3 comes into intimate contact with a substantial portion of the outer
4 circumference surface of said body of said infusion assembly when said
5 base is fitted onto said body.

1 21. Method of claim 20, further comprising the step of:
2 coating said interior circumference surface of said base with an
3 adhesive means so that said base is bonded to said body of said infusion
4 assembly once said base matingly fits over said body.

1 22. Method of claim 13, further comprising the step of:
2 providing said base with two pairs of arms, one of said pair of arms
3 being provided for embracing said hub of said body while the other of said
4 pair of arms being provided for embracing the portion of said body
5 separating said wings from said needle.

1 23. Method of claim 13, further comprising the step of:
2 providing at said base a tubular portion that slidably fits over an end
3 portion of said body to thereby matingly fit said base to said body.

1 24. Safety apparatus, comprising:
2 a base adapted to fit onto the body of an intravenous device having
3 one end from which a needle extends and an other end to which a tubing
4 is connected; and
5 a housing hingedly attached to said base, said housing being
6 pivotable to a position in substantial alignment along the longitudinal axis
7 of said base so as to envelop said needle.

1 25. Safety apparatus of claim 24, wherein said base is configured to
2 have an interior circumference surface that comes into intimate contact
3 with a substantial portion of the outer circumference surface of said body.

1 26. Safety apparatus of claim 25, wherein said interior circumference
2 surface of said base is coated with an adhesive means so that said base
3 is bonded to said body of said intravenous device once said base comes
4 into intimate contact with the outer circumference surface of said body.

1 27. Safety apparatus of claim 24, further comprising:
2 locking means integrated to said housing for fixedly retaining said
3 needle within said housing once said needle is enveloped by said housing.

1 28. Safety apparatus of claim 27, wherein said locking means comprises
2 a hook that snaps over and retains said needle within said housing when
3 said housing is pivoted substantially to said alignment position.

1 29. Safety apparatus of claim 27, wherein said locking means comprises
2 at least one pair of fingers coacting to prevent said needle from being
3 removed from said housing once said housing is pivoted to envelop said
4 needle.

1 30. Safety apparatus of claim 27, wherein said base includes at least
2 one locking means and said housing includes at least an other locking
3 means; and

4 wherein said one and other locking means coact with each other for
5 fixedly retaining said housing relative to said base when said housing is
6 pivoted to envelop said needle.

1 31. Safety apparatus of claim 24, wherein said base comprises at least
2 one pair of arms for embracing said body to thereby firmly secure said
3 base to said body of said intravenous device.

1 32. Safety apparatus of claim 24, wherein said base comprises a tubular
2 portion that slidably fits over an end portion of said body of said
3 intravenous device.

1 33. Safety apparatus of claim 32, wherein said base comprises a pair of
2 arms extending from the end of said base remote from said tubular portion,
3 said pair of arms snappingly fitted over an other portion of said body after
4 said tubular portion is fully mated to said end portion of said body of said
5 intravenous device.

1 34. Safety apparatus to be used with an intravenous infusion device to
2 prevent a contaminated needle of said infusion device from being exposed
3 to the environment, comprising:

4 a base adapted to be matingly fitted to the body of said infusion
5 device whereto said needle is attached, said base being configured to
6 have an interior circumference surface that comes into intimate contact
7 with a substantial portion of the outer circumference surface of said body
8 when said base is fitted to said body;

9 a housing hingedly attached to said base, said housing being
10 pivotable to a position in substantial alignment along the longitudinal axis
11 of said base for enveloping said needle; and

12 locking means integrated to said housing for fixedly retaining said
13 needle within said housing once said needle is enveloped by said housing.

1 35. Safety apparatus of claim 34, wherein said base having at least one
2 pair of arms that firmly embraces a portion of said body when said base is
3 fitted to said body.

1 36. Safety apparatus of claim 34, wherein said locking means comprises
2 a hook that retains said needle within said housing once said housing is
3 pivoted substantially to said alignment position.

1 37. Safety apparatus of claim 34, wherein said base comprises a tubular
2 portion that slidably fits over an end portion of said body of said infusion
3 device.

1 38. Safety apparatus of claim 34, wherein said interior circumference
2 surface of said base is coated with an adhesive means for bonding said
3 base to said body of said device when said base is fitted to said body.

1 39. An intravenous device, comprising:
2 a body having one end from which a needle extends and an other end to
3 which a tubing is connected; and
4 a housing hingedly attached to said one end of said body, said housing
5 being pivotable to a position in substantial alignment along the longitudinal axis
6 of said body so as to envelop said needle.

1 40. Intravenous device of claim 39, further comprising:
2 locking means integrated to said housing for fixedly retaining said needle
3 within said housing once said needle is enveloped by said housing.

1 41. Intravenous device of claim 40, wherein said locking means comprises
2 a hook that snaps over and retains said needle within said housing when said
3 housing is pivoted substantially to said alignment position.

1 42. Intravenous device of claim 40, wherein said locking means comprises
2 at least one pair of fingers coacting to prevent said needle from being removed
3 from said housing once said housing is pivoted to envelop said needle.

1 43. Intravenous device of claim 40, wherein said one end of said body
2 includes at least one locking means and said housing includes at least an other
3 locking means; and

4 wherein said one and other locking means coact with each other for
5 fixedly retaining said housing relative to said body when said housing is pivoted
6 to envelop said needle.

1 44. Safety intravenous infusion assembly to prevent a contaminated needle
2 of said infusion device from being exposed to the environment, comprising:

3 a body of said infusion device having an end whereto said needle is
4 attached;

5 a housing flexibly attached to said body, said housing being pivotable to
6 a position in substantial alignment along the longitudinal axis of said body for
7 enveloping said needle.

1 45. Safety intravenous infusion assembly of claim 44, further comprising:

2 locking means integrated to said housing for fixedly retaining said needle
3 within said housing once said needle is enveloped by said housing.

1 46. Safety intravenous infusion assembly of claim 45, wherein said locking
2 means comprises a hook that retains said needle within said housing once said
3 housing is pivoted substantially to said alignment position.

1 47. Safety intravenous infusion assembly of claim 44, further comprising:
2 first locking means integrated to said end of said body; and
3 second locking means integrated to said housing;
4 wherein said first and second locking means coact with each other to
5 fixedly hold said housing relative to said body when said housing is pivoted to
6 said alignment position.